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Claims

Cl. 1   A method for increasing neuronal cell AP-1 or NF-IL6 transcription factor activity in a subject, comprising administering to the subject an amount of an isolated peptide
5   which comprises the amino acid sequence of SEQ ID NO:1 effective to increase the activity of AP-1 or NF-IL6 in the subject.

Cl. 2   The method of claim 1, wherein the isolated peptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4 and SEQ ID NO:5.

10   Cl. 3   The method of claim 2, wherein the isolated peptide is conjugated to a compound which facilitates transport across the blood-brain barrier into the brain.

Cl. 4   A method for binding calcium comprising contacting a calcium containing environment with the composition of claim 3.

Cl. 5.   The method of claim 4, wherein the isolated peptide comprises the amino acid
15   sequence set forth in SEQ ID NO:10.

Cl. 6   A method for identifying a calcium-binding peptide comprising
        providing a putative calcium-binding peptide,
        contacting the putative calcium-binding peptide with an environment containing calcium, and
20   determining the calcium binding of the peptide.

Cl. 7   The method of claim 6, wherein the putative calcium binding peptide is a variant of the amino acid sequence set forth in SEQ ID NO:1 or SEQ ID NO:19.

Cl. 8.   The method of claim 6, wherein the step of providing a putative calcium-binding peptide comprises providing a library comprising peptides having the amino acid sequence
25   set forth in SEQ ID NO:1 or SEQ ID NO:19.

Cl. 9   A method for identifying a peptide which increases AP-1 or NF-IL6 transcription factor activity, comprising

providing a peptide,

contacting the peptide with a cell which can express AP-1 or NF-IL6 transcription factor activity, and

determining the AP-1 or NF-IL6 transcription factor activity to identify the peptide which increases AP-1 or NF-IL6 transcription factor activity.

Cl. 10. The method of claim 9, wherein the peptide is a variant of the amino acid sequence set forth in SEQ ID NO:1 or SEQ ID NO:19.

Cl. 11   The method of claim 9, wherein the step of providing a peptide comprises providing a library comprising peptides having the amino acid sequence set forth in SEQ ID NO:1 or SEQ ID NO:19.